

**ARGUMENTS**  
IN FAVOUR OF  
**THE PROPOSED CANAL**  
ROUND  
**THE WESTERN ABUTMENT**  
OF  
**THE SCHUYLKILL PERMANENT BRIDGE:**  
INCLUDING SOME REMARKS  
ON  
THE REPORT OF A COMMITTEE  
OF  
**THE CITY COUNCILS**  
TO THAT BODY.

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**BY GEORGE W. SMITH.**

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*PHILADELPHIA:*

March 7, 1831.



## ARGUMENTS

*In favour of the proposed Canal round the Western  
Abutment of the Schuylkill Permanent Bridge.*

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THE immense trade which the numerous and important canals of Pennsylvania, which are completed or in rapid progress, are expected to convey to Philadelphia, requires every accommodation which the means of our commonwealth can supply. The tonnage of the Schuylkill Navigation works, (the great channel into which all the navigable streams and canals of the state discharge their commerce) is already large, but will be at least quadrupled in a few years. Our readers are aware, that the extensive and connected chain of the internal improvements of Pennsylvania, terminates at the upper bridge, about three-quarters of a mile above the Permanent Bridge, which at present excludes masted vessels from that important portion of the river, between the bridges just named, which would otherwise be the natural western harbour of nearly half of the City, all of Spring Garden, of the Northern Liberties, and in some degree, of all the populous and wealthy district which bounds our metropolis to the northward.

At the time when the Permanent Bridge was erected and permitted to interfere with the wise and provident plan of the town of Philadelphia, sanctioned and guarantied by William Penn, our inland commerce was carried on almost exclusively by land conveyance; the Schuylkill was rarely if ever visited by masted vessels of burthen; the *immediate* inconvenience was therefore not felt, and consequently not appreciated. Nevertheless, even at that period, the owners of property north of High street, and others, whose rights and future interests were thus assailed and violated, earnestly remonstrated; their just complaints were for a quarter of a century disregarded, but at length have been heard by our legislature, and their rights are about to be restored. We rejoice in this just act of our House of Representatives, and confidently hope that the Senate will confirm their decision—a decision, not only granting justice to the *aggrieved majority of our citizens*, but also of immense advantage to the whole state of Pennsylvania. This act will lessen the odious and injurious monopoly of the few active and clamorous alarmists, who are vainly endeavouring to retain, to the detriment of our immense population, the benefit which former improvidence, and the re-

cent vast expenditures of Pennsylvania, have temporarily permitted them to grasp.

A plan has at length been devised, for obviating the evils to which we have alluded, and will presently detail; a plan which is perfectly practicable, which cannot effect any injury, and which respects the rights of all, whilst it will greatly increase the prosperity of Philadelphia and the commonwealth. A canal is to be constructed around the western abutment of the Permanent Bridge, without any interference with, or injury to that useful structure; without any interruption to the important highways with which it communicates. Engineers of the first eminence in our country, in scientific and practical knowledge, as well as in personal character, have designed and sanctioned this projected improvement. For years the subject has been before the public; numerous and repeated petitions in its favour, signed by many of our most respectable citizens, in addition to the memorials of some of our public authorities and town meetings in the districts, added to the loud complaints of the humble but useful boatmen and others, who have suffered from the present state of the river navigation, have at length been heard, and will be attended to, notwithstanding the opposition which has only recently been manifested by a few individuals.

We will not now consider the comparatively insignificant rights and interests of those who own property between the two bridges, although justice requires their protection. This would indeed be a limited view of the subject. The zeal and vigilance of private interest, may be safely intrusted with its defence. Our efforts will be exerted solely for the public. For this we claim no merit; we have no private interest to promote; we have no property within miles of this spot. On the contrary, if our interest were permitted to bias our judgment, we ought to be silent—a policy which decency at least, if not patriotism, requires of all whose private interests are at variance with those of the community.

Our readers who may have visited the Schuylkill, are aware, that when boats leave the canal near the upper bridge, they must encounter the tides, the storms, and the freshets, of the broadest and most exposed part of the river, which here suddenly turns to the south. These large and unwieldy barges are necessarily compelled to depend for their future progress on the laborious use of oars, or poles, used to great disadvantage in the muddy bottom, and sometimes wholly useless in the deep pools into which the current carries them. Hence delay—sometimes prolonged detention—injury to the cargoes—danger to the boats and their crews, and, we may add, from personal observation, sometimes loss of life. These evils are also necessarily attended with

expense, *a tax which amounts to upwards of five per cent. on the freight of every ton which comes from the Susquehanna to Philadelphia*, via the Union and Schuylkill canals, to be exported in masted vessels from the Schuylkill. The same statement is of course applicable to importation. For the correctness of these facts, we refer to any person conversant with the trade of the river ; for the statement of expense, we confidently refer our readers to the Schuylkill Navigation Company, although we have no permission from them for the reference. We may ask, is this unnecessary tax (which will be diminished when the canal is finished) to be endured by the whole state for the continuance of monopoly ? Is the state to lose much, that the monopolists, who render no benefit as a compensation, may receive from the public an additional profit ?

It has been heretofore usual, even in despotic governments, for monopolists to provide (however expensively for the public) sufficient accommodations for the trade which they prosecuted. If this cannot be done at present, with a trade of only 180,000 tons per annum, when the canals in the interior have not yet been brought into use—what will be the result when the 1400 miles of rail roads and canals now made or in progress, shall be completed, and pour their hundreds of thousands of tons into the Schuylkill ? The wharves will groan under the mountains of coal, iron, plaster, stone, and other bulky articles. Our readers may recollect the desolate aspect of this river only a few years since. Let them visit it now, and calculate how much space for wharves and storehouses the commerce will soon render indispensable. The trade of the Delaware affords no comparison. The articles are in a great measure different ; they are less bulky, and consequently require less space. The monopolists on the Schuylkill, (many of whom have only recently purchased their property) may soon extort their own terms from the necessities of the merchants of the interior, until the intolerable extortion and inconvenience may render docks, excavated at enormous expense, absolutely necessary. Abroad, this has frequently been a matter of necessity ; here it would be impolitic, where nature has done every thing ; the barrier bridge may be turned, not removed, with manifest advantage, even at present ; hereafter it will be indispensable.

We trust that we have shown that additional wharves will be necessary, and that inconvenience and expense are the results of the obstruction which the bridge presents to navigation. If, therefore, the intended canal will not injure the bridge, or in any manner obstruct the highways leading therefrom—it will confer advantages on the commerce of the great artery of the state ; and, by enabling vessels to ascend the river, will not only



benefit the state, but diminish the distance between the largest and most populous part of Philadelphia, (the northern) and the harbour. Some persons, however, who do not venture to call in question the existence of the evils we have previously mentioned, have nevertheless endeavoured to raise the alarm, that the bridge and great western highway leading thereto will be rendered insecure and impassable, in consequence of the canal crossing the road ! They decry the project on account of its novelty, as well as danger. The first objection would excite the ridicule of any of our intelligent citizens, who may have visited Europe, and there have frequently seen canals for similar purposes crossing the most crowded highways of cities—highways far more thronged than any avenue in the Union. The cities of London, of Hull, of Liverpool, &c., may be mentioned in point. The docks of London communicate with the river by canals, which cross crowded streets, where, if interruption existed, it would be highly injurious : the construction of two small pivot or of sliding bridges across these canals, *one of which only at the same time* is opened, (when necessary) prevents even a moment's delay to those using the highway. The experience of many years has established their efficiency and safety. A similar plan, which renders any delay almost impossible, has been adopted for the small canal around the bridge. It is a waste of time to answer the crude and strange objections of those who acknowledge their perfect ignorance of the application of these bridges in practice, and who gravely have attempted to demonstrate the impossibility of their success, when a little inquiry would have proved to them, that long experience had rendered any doubts or speculations on this subject not only superfluous, but ridiculous.

The efficacy of such bridges in maintaining an uninterrupted intercourse, has never been questioned by any person conversant with engineering. The notions of the unlearned or the interested, who invade the province of the engineer, will of course have no weight with the public ; their inexperience may excuse their doubts, but the deliberate opinions of all the engineers, without exception, who have examined this project, have been given in its favour ; they have assured the public of its practicability, security, and uninterrupted use. We therefore consider this point as settled ; and now proceed to notice the objections, not of individuals, but of a committee of our City Councils.

Notwithstanding the obvious utility of this canal, we have seen with some surprise a movement in opposition to it, where it ought to have received support. The committee have fulminated an anathema, in the form of a report to the Councils, against this canal, which will so largely contribute to the interest of their constituents, as well as to that of the inhabitants of the adjacent

districts. Whether the members of the councils will act on this subject, remains to be determined. The committee allege, that, as one branch of the legislature has authorized the project, they felt some delicacy in interfering to oppose it. It is nevertheless plainly intimated that the legislature have disregarded "the effects of the proposed canal upon the public interests at large," and that the interests of the bridge and proposed canal companies alone have been attended to ; but in a *subsequent* part of their report, they endeavour to alarm the public, by stating that the legislature "must have had such fears and doubts as your committee entertain" respecting the evils of the proposed canal, which they assume to be the *necessary* interruption of the highway. That the canal bill "contemplates various sorts of interruption and obstruction," which it proclaims will inevitably occur, "and then makes provision by penalties, to prevent, if possible, that unhappy result." These two statements are therefore manifestly inconsistent, and our readers we trust will perceive that the legislature, who have not acted precipitately in this measure, (as the committee intimate) have regarded not the mere interests of the bridge and canal companies, nor the equally important interests of the *wharf proprietors*, but the commercial welfare of the state at large. Having heard the statements, and seen the plans of eminent engineers, they have acquiesced in their opinion—that no interruption of the highway will take place. The committee, who have not thought proper to consult engineers, have resolved that interruption must and will take place, although they admit that they have no experience in these matters, and that they are wholly unacquainted with any work of the kind in the Union or elsewhere, that is in successful operation. A list, comprising numerous works similar in principle, will be presently submitted to our readers. We may here remark, that the penalties in the bill were not introduced by *the legislature*, who were perfectly satisfied respecting the practicability of the plan ; they were introduced by the canal company, in order to remove the shadow of an apprehension resting on the minds of *the bridge company*. If, by any possibility, the road over this small canal (which is only twenty-four feet wide,) should be obstructed by its bridges being out of order and impassable, (*all of which bridges must be thus deranged before such impediment can take place,*) *they* must be injured before the city can be affected ; hence the heavy and unprecedented penalties provided in the bill, are first to be paid to them. The committee suppose that the penalties cannot be legally collected, although they do not attempt to assign any reason for their opinion. Nor are they correct in point of fact in their statement, that the advocate for the canal, in their presence, acquiesced in this legal novelty. We

may further state, that if no statutory penalties existed, the common law remedy remains as an effectual and ever during safeguard. Penalties are, therefore, in the present case, provided, not to atone for or to remedy injury, as the committee state, but for the main purpose of preventing its occurrence.

A further proviso is contained in the bill, which ought to satisfy the most timid—the *immediate abolition of the canal* by the state, if it should deem it injurious at any time hereafter. The committee do not however approve of the passage of bills containing such salutary provisos for the abatement of nuisances. The common law doctrine on this subject is nevertheless not only well known, but universally approved. The previous reasoning of the committee necessarily leads to the inference, in this case, that laws intended to prevent or abate nuisances, necessarily bring them into existence ! Again, the committee suppose that if the canal should prove to be a public nuisance, the misguided benevolence of the legislature, their regard for “the widows and orphans” who “*may*” hereafter become the proprietors of this work, will cause them to disregard the public interests, and to sacrifice the welfare of the million in misplaced charity to the few. The tender mercies of our legislature need not be apprehended by those who are familiar with its history or its duties.

The committee proceed to describe the importance of the highway crossing the Permanent Bridge, as the great “mail route” of the Union ; “the great medium of intercourse between the eastern states and the states west and south of Philadelphia,” “the main link that connects Philadelphia with Pennsylvania,” &c. (although we trust that other links, more binding and indissoluble, unite us.) The committee do not seem to be aware that this great “mail route” *has already been severed at many points, for purposes far less important than the present.* For instance, we will describe some of the existing, and, of course, intentional “severings” between New-York and Washington. The only communications by land which the great commercial emporium of the Union, situated on Manhattan Island, will possess with the continent, when the Harlaem canal, now in progress, shall be finished, will be by bridges ; all of which will be provided with draws, for the passage of masted vessels. In proceeding either west or south, we cross the Hudson ; the highways leading to the immense regions in these directions, are interrupted, almost at her very gates, by the Hackensack and Passaic rivers, each of which is crossed by several bridges, all of them being provided with draws, for the passage of vessels to the towns above. At the Rariton river, the bridge has a draw. The Neshaminy, near Bristol, in Pennsylvania, has a draw. We might, perhaps, also



mention the inconvenient and clumsy draw or slide in the bridge at Gray's Ferry, over the Schuylkill. Proceeding to the south, Chester and other creeks have also drawbridges. The Christiana, at Wilmington, in Delaware, has a draw. At Washington, the Potomac bridge has also a draw, &c. In New-England, the bridges connecting the most important thoroughfares, are in a vast number of instances provided with draws for the passage of masted vessels. We might mention many, but will merely select one, inasmuch as it presents a case (as at New-York) strongly in point, and in conjunction with it, ought to be decisive of the question in controversy. The city of Boston is naturally connected with the main land only by a long and very narrow peninsula. The Charlestown bridge, which for some time afforded the only artificial road across the water surrounding this populous and commercial town, is provided with a draw. The legislature of Massachusetts compelled the bridge company, by their charter, not only to permit the passage of vessels gratis, but also to pay a compensation to every navigator using the draw, for even the slight detention to which the bridge necessarily subjects them. This provision clearly shows which of "the great highways," the land or the water, has been deemed the most important when leading to a commercial city.

We particularly request our readers to observe, that none of the drawbridges which we have mentioned, are for a moment to be compared, in point of *safety, celerity, certainty, or facility* of operation, with the swivel or pivot bridges of cast iron, which, (notwithstanding their great cost,) are to be placed across our proposed canal ; besides, the former are all *single* bridges, and of course, from this circumstance alone, must inevitably arrest the progress of those using the highway, during the short time they are raised or removed. Our proposed swivel bridges will be at least *two* in number ; *one or more of which will be always kept in place* over the canal, thus obviously preventing the delay or detention of even a moment to any person passing on the highway.

Adverting, however, to the drawbridges before mentioned, we may inquire, whether *these* inferior, and comparatively defective, contrivances, have ever been found to occasion public injury, even when they form the *sole* means of passing rivers and canals, when no additional bridge is provided as a reserve, in case of the occupation or deficiency of the one in use ? Have they ever retarded the arrival of the mail, or been deemed "public nuisances ?" Accidents may indeed happen to them, as to all the works of man ; but is this an argument against a public work, on which not even the shadow of any other objection is admitted by any person to rest—a work which will be

otherwise of vast utility? Accidents may happen, say the timid and the uninformed; accidents must and shall happen, reply the prejudiced or the *interested*. Therefore interruption will be the necessary consequence on this highway leading to the Permanent Bridge. In order to prevent this contingent, improbable, nay, almost impossible, inconvenience, an evil affecting the interests of the great majority of the citizens of Philadelphia, and embarrassing the commerce of the city with the whole interior of Pennsylvania—is to be *constantly* endured—to be endured without complaint or alleviation—an evil inadvertently and illegally inflicted on the interests of many of our citizens, and on the just rights of that larger portion of our city and adjoining districts north of Market street—the evil inflicted by the company who erected the Permanent Bridge. Every consideration of state policy, of justice, (however tardy,) to individuals, nay, even the special interests of the Bridge Company\* demand, that the “public nuisance” of an obstructed navigation, shall not be made, in fact, what the bridge is in name—“Permanent.”

We have alluded hitherto solely to the experience of our own country, in relation to the imperfect means adopted to permit the passage of vessels through bridges. The committee intimate, that such works do not exist here or in Europe! They might with more propriety remark, that almost any person who has travelled, can prove the inaccuracy of their statement; and we may add, that the erection of a bridge in tide water, without any means provided for the passage of vessels to a large portion of a vast commercial town, (from which canals and rail-roads diverge, in lines extending many hundred miles,) is “such a work as does not exist, at least in the United States,” or “elsewhere.” In Europe, we know of but one instance even bearing any resemblance; the London bridge, across the Thames, is the property of the *city*, whose special interests have prevailed in continuing it in its position. A short distance above it, the river would, even if unobstructed, cease to be navigable for large vessels; and the adjoining part of the town is the abode of artisans and shopkeepers; and still further west is occupied by private residences. Nevertheless, great as has been the inconvenience resulting from this bridge, so powerful have been the “vested interests” engaged in its maintenance, that every plan for rendering it passable by masted vessels has been defeated.†

\* It is obviously the interest of the Bridge Company and of the High street merchants, that the bridge shall be near the centre, and not at the head of navigation.

† It is known to our readers, that small craft can proceed above this bridge by striking their masts; the arch of the bridge is fifty feet high. This plan is not

Below this bridge no other has ever been permitted to exist. The celebrated but unfinished tunnel of Rotherhithe, a substitute for a bridge, on which such enormous sums have been expended, shows the value attached to an unobstructed navigation. The want of space in the river, and other causes, has rendered the construction of docks, (at an expense of upwards of twenty-three millions of dollars,) indispensable. Across the entrances of these docks, *large* moveable bridges are placed,\* over which streets are conducted, which, although not the only *leading* thoroughfares of London, *are much more thronged than our road over the Permanent Bridge*. We refer our readers for further information to the maps of London, which are in our public institutions, and also to the evidence, &c., on the docks, given before the house of commons.

Liverpool and Bristol have extensive docks ; the great highways cross them by means of moveable bridges. In the latter city, the bridges of the highway across the Frome, are cases in point. Hull is entirely surrounded by artificial docks, which *insulate* the town ; the *only* communication with the adjoining country is across moveable bridges. Consequently, the four great commercial cities of England afford authority for our proposed canal. On the continent of Europe, Strasburg and Mayence on the Rhine, Rouen on the Seine, and Vienna on the Danube, all maintain their *only* communications with the opposite shores by bridges of boats, which, by means of draws, (interrupting of course, "these great highways") admit vessels to pass them. Havre, the great northern commercial town of France, and St. Petersburg in Russia, are divided, the first by docks, the second by the river Neva ; the communication in each is maintained by moveable bridges, which permit the passage of vessels. Many other cases could be readily mentioned, where moveable bridges have been "elsewhere" adopted "without public detriment ;" their number, continuance, extension, and improvement, we trust will not be diminished by the report of the committee. The authorities in Europe and in the United States, have not hesitated to "sever," in this manner, the most crowded and important roads and streets.

applicable at Philadelphia ; not only is the bridge of less height, but the commerce is different. We cannot alter the rigging of all of the coasters in order to pass this bridge ; moreover, any such alteration would render them less safe, and at all events not equalize the advantages above and below.

\* On one occasion, one of these bridges was not in order for passing, owing to gross negligence. The offenders were fined, and we have not heard that any complaint has been made since. This solitary instance has been made a weapon against our proposed canal ! We have been often detained at the Schuylkill bridges and turnpike gates for some time ; the gates being shut, and the toll collectors asleep. Is this a valid argument against gates and toll houses ? These manifestly occasion considerable delay at all times.



The interruption of a highway, occasionally, for a few minutes, is perfectly justifiable and expedient, provided the result be the removal of obstructions from another highway of greater importance; this is self-evident. We shall presently prove that the Schuylkill river is a highway far more important to the state and to our commercial metropolis, than this, or any other turnpike whatever. The committee strangely exaggerate the importance of the latter, when they term it "this great social artery," not merely of the city and state, but of the Union, which when "cut asunder" by the suicidal act of our legislature, must, in *their* opinion, drain our commerce from its "natural channel," (*quere*, is the road or the river the *natural channel*?) produce litigation, "swell the measure of their wrongs," and occasion "vexation, decay," and "gradual disuse of the bridge." These Oriental, or rather *Southern* modes of expression are employed "to confirm apprehensions, entertained, *although not expressed*" by the committee, in relation to the effects of the canal bill; we cheerfully employ their *language*; "it, in truth, loudly calls, not only on the citizens of Philadelphia, but on all those in Pennsylvania, and elsewhere, who have an interest in the great highway, to arouse and reflect upon the nature and tendency of the proposed work."

This recommendation, at least, will be concurred in. The result of the slightest reflection on the *facts* which the case presents, will clearly indicate the *highway* in which the *public* are interested.

The importance, however, of the turnpike, and the utility of maintaining it unimpaired, are of course universally conceded, and, therefore, this trite and repeatedly urged topic, may be dismissed. With deference however to the committee, we deny that this road is the vital artery of Philadelphia; even at present, other bridges (less useful and important we of course grant) exist, and others are contemplated for the maintenance of communications with the West; with other points of the compass this bridge has no connexion. Its relative importance will materially diminish when our rail-road and canals, in two years hence, will be finished. *These "highways"* are vastly more important—their commerce will be at least *ten-fold* the amount passing over the bridge. This commerce the bridge must, to a certain extent, materially impede and embarrass. *This is not a question, as the reader will perceive, affecting the property of a few wharf owners—as the committee have thought proper to consider it.* The whole of Pennsylvania (with the exception of that portion watered by the Delaware) has a direct interest in it, as we have endeavoured to prove in the commencement of this examination. The committee intimate that the existing evils



(the consequences of which we have previously endeavoured to describe) will not affect "the trade of the Schuylkill, which does not rest upon so slender a basis; *its greatness cannot be abridged or enlarged* by the diminution or addition of wharves," &c. that it is "the natural depot into which commerce must necessarily be poured," &c. These statements manifest so much want of knowledge of the fundamental and elementary principles of commerce that any refutation is unnecessary.

Our citizens are too well aware, that in the great struggle with our rival cities for the commerce of the West, our success entirely depends on straining every nerve, and affording every facility to trade, and thereby lessening the disadvantages of our situation, remote and difficult of access from the ocean and the western country. Is the competition of New-York so trifling that we may fold our arms and sit at the receipt of custom? The state and city have thought differently; they have expended on turnpikes, bridges, canals, and rail-roads, about thirty-four millions of dollars, since 1791. The last link of the stupendous chain of works is defective, and the committee deem its repair not only useless but detrimental.

The Schuylkill will hereafter be the recipient of a large trade, whether the proposed canal be made or not; cargoes brought hundreds and thousands of miles will float on its bosom; after their long voyage, we trust that on their arrival at tide water, they will meet with no inhospitable reception—no delay, danger, or expense, that can be lessened or removed by any wise and salutary improvement.

The evils to which vessels are at present exposed, have been already mentioned; they have occasioned loud and frequent complaint; nevertheless, they are entirely overlooked, and have not been even alluded to by the committee. They pointedly state *in italics*, "that the only inconvenience that can be really apprehended is, namely, that the owners of lots above the bridge will not at once realize rents, as high as those rents would be, if vessels with masts could lie at their wharves." They state that this "inconvenience forms no just ground of complaint, inasmuch as the present owners of land between the two bridges have purchased their property since the erection of the lower bridge, the present barrier to the ocean." If such were the fact, the welfare of the state requires the removal of this barrier, although such removal must benefit three-fifths of the town of Philadelphia, *without equally increasing the value of the property below the bridge, which at present has a monopoly*. But the least inquiry would have proved to the committee, that the fact is the very reverse of their statement. At least four-fifths of the river front above the bridge is owned by citizens, or the heirs

of citizens, who held it before the erection of the Permanent Bridge. The committee state, that if any injury had been inflicted on the owners of these lots, they would have remonstrated at the time against the erection of the Permanent Bridge, and they therefore infer that they acquiesced ! It is well known to many of our citizens, that they did most earnestly remonstrate formerly, and their neglected petitions are now on file at Harrisburg. Judge Peters has stated this grievance distinctly and pointedly in his excellent and celebrated history of that structure, which was published twenty-five years since, (see p. 18.) But these appeals were overruled, because no immediate injury of moment was inflicted. The wharf of Mr. Evans, at Race street, (now inaccessible from the river below,) was the only establishment of the kind on the upper part of the river, which was then far remote from the hum of commerce, and the population of the city.

The committee are also incorrect in their defence of the privileges or vested interests of those who own property below the bridge ; “the price which they paid” for their land, was not in many cases “in proportion” to the present value of their property : many of our readers are perfectly aware that the rise in the value of this property, (which has been produced solely by the internal improvements in the state,) has been beyond all calculation, and that some of this property was owned many years ago by the present proprietors or their families. The committee, however, virtually abandon their previous arguments, by admitting that the bridge obstructs navigation to such a degree, that it never ought to have been built ; they however maintain, that the vested interests of those who own property in the vicinity ought not to be invaded by any innovation. They in another part of the report are not consistent in this respect for vested rights, exhibiting “utter indifference as to the rights and interests of the owners of property *north* of High street.” In their language, “those owners might with justice complain.” As the committee have suggested the following argument, may we not inquire why it is not applicable to *both* sides of the bridge ? “there is no new road made, or work erected, which does not change the relative state of some portion of our citizens :” if, therefore, public welfare *formerly* required the sacrifice of the interests of those owning property above the bridge, and if the same public welfare now require, or be necessarily attended with their restoration, (by means of the highly useful canal,) why is it fair to say that the owners of property above the bridge may have an incorrect advantage ? We “therefore do pretend,” (notwithstanding the veto of the committee,) to repeat, that “an advantage has been taken” of the northern proprietors,

who "were deprived of their right," which is now to be resumed.

The committee believe, that the shores of the Schuylkill, between Cedar street and the bridge, (including both sides of the river) are more than sufficient for any future trade of this stream. The question is asked, whether "the shores of the Schuylkill will be in greater requisition than the front of Philadelphia in its greatest prosperity?" It surely will be admitted, that "the shores of the Schuylkill, below High street, 7000 feet in extent, will be adequate to the accommodation of all vessels with masts that can ascend the Schuylkill, for its trade, when it is recollected, that the front, for all the trade of the city on the Delaware, is only 5318 feet." We have already mentioned that the trade of the Schuylkill, from the bulk of the articles which it conveys, requires more space than the Delaware trade. Again, a ship of 500 tons on the Delaware, can discharge her cargo at a wharf having a front but little greater than the wharf required for a boat of 25 or 40 tons on the Schuylkill. Again, from the narrowness of the latter river, wharves cannot be built out into the stream as on the Delaware. But why have the committee given the extent of *both* shores of the former river, and only *a quarter of one shore* of the latter? The commercial front of Philadelphia on the Delaware, extends 20,500 feet, and not 5,318, as it would seem to most persons reading the report: this too is exclusive of the shore and wharves above and below the town, and *not including Camden*, which is certainly more entitled, from its wharves and commerce, to be considered as commercially connected with the town, than the uninhabited marsh of Blockley, on the west side of the Schuylkill. The committee state the extent of the city front on the latter river above the bridge, at 2,150 feet; why did they not in *this case* state the front on both sides, or at least on the east side beyond the city, as far as the Fair Mount Bridge? The distance between the bridges is 4,100 feet, being 250 *more* than the south front extending to Shippen street, below which, the United States property, occupied by the naval asylum and the arsenal, prevents the extension of wharves.

The committee do not seem to think that their report, if attended to, would necessarily transfer the shipping, wharves, and consequently the trade, (which naturally ought to belong to the *eastern* side of this river, *above* the bridge) to the marsh of Blockley, on the *western* side, below that structure. The welfare of the city clearly indicates the adoption of the necessary policy. The committee state that one branch of the legislature has precipitately sanctioned the project of the proposed canal, without inquiring into its merits, and before any "scientific and local inquiry and examination" had been made. The legislature were

informed on this subject, if the committee were not. The surveys and plans were long since made by one of the most eminent engineers in the Union, (Major Wilson) and although the minute details were not sent to Harrisburg, the plans, which were sufficient, were examined by the legislature.

The committee observe that they “do not inquire how many, or whether any petitions were presented in favour of” this work; if they had inquired, they would not have expressed any doubts or denial. An immense number of petitions have been forwarded during the present, as well as the preceding year, “in favour of this work.”

*The petitions of the boatmen only*, using the Schuylkill Navigation works, are signed by several hundred names. Memorials and petitions, signed by an immense number of other persons, are, with the former, on file at Harrisburg, and every day adds to their number and importance.

Having now examined the objections made to the proposed canal, we may express our regret, that the numerous engagements of the committee, as members of the city councils, have not allowed them the leisure to examine this project; a project, new, and of course not thoroughly understood by many of our intelligent and patriotic citizens, who unite with the committee in deprecating as an evil any obstruction to the most splendid and useful bridge, and the most important turnpike in Pennsylvania, the benefits of which are universally acknowledged. The laudable caution of the committee, (a salutary characteristic of all prudent, deliberative legislatures) has been the fortunate means of collecting, from various and distant sources, a considerable number of facts and opinions, not generally known to our citizens. A few of these have perhaps been mentioned in our previous pages, and several documents, in corroboration, are appended to this pamphlet. We entertain the confident expectation, that the further investigation of the committee, who will hereafter have access to much information not hitherto submitted to them, will terminate in accordance with their intention in promoting the public welfare. We have endeavoured to prove, that the interests of the city, and of the districts, the interests of the Bridge Company, the vested interests of the High street merchants, &c., and of all north of that street, of the owners and employers of boats and shipping, of the producers and consumers of Pennsylvania, and, finally, that every motive of state policy and justice—require “the construction of the canal round the Western Abutment of the Permanent Bridge.”



## NOTES.

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No. 1.

*Philadelphia, March 1st, 1831.*

GENTLEMEN,—

The shortness of the time which I have had to prepare the sketches explanatory of the plan for opening a canal in the rear of the abutment of the Schuylkill Permanent Bridge, has prevented me from giving more than a general outline of the manner in which the work may be accomplished. I consider, therefore, that the plans may be improved when more time can be allotted to the subject. Many works of a similar kind, have been constructed both in this country and in Europe. I mean excavating canals, docks, and basins, in marsh land, which is subject in its natural state to be overflowed by tide water. I am of opinion, that the intended canal is practicable, and that by using the proper means, a sufficient depth of water can be maintained for the navigation of sea vessels.

The next point to which my attention has been directed, is the construction of such bridges across the canal, as are calculated to secure to the public an uninterrupted intercourse with the City of Philadelphia.

It is proposed to erect two bridges over the canal, each of which shall be sufficiently wide to admit the passing of two carriages; and that during the passage of a vessel through the canal, one bridge *only* shall be opened at a time.

There are two modes by which this can be effected; the one, by means of a cast iron bridge turning on a centre, and which is the plan generally adopted at the docks on the Thames, so as to keep open the communication on the great thoroughfares to London, and the other a wooden bridge, designed by Mr. Erdmann, to move in the direction of the road on iron rails; of the former, I have given a plan and elevation, (see sketch No. 3,) and with regard to the latter, I refer you to the plan drawn by Mr. Erdmann.

The time occupied by a vessel in passing a bridge constructed on either of the above plans, is about three minutes. In confirmation of this opinion, I submit the following extract from the "Minutes of Evidence," given by the late celebrated engineer, Mr. Rennie, before a committee of the British parliament, when investigating the subject of the London docks.

*Quere.* "What are the best accommodations to secure to the

public a passage over the cut from Blackwall, and particularly the great leading thoroughfares to London ?

*Answer.* "I propose at each of the great leading thoroughfares, double drawbridges shall be placed at such a distance from each other, that while one is open the other shall be shut ; and I should estimate the necessary distance at about two hundred feet. If a *ship* moves at the rate of one mile and a half per hour, it will be about one hundred and thirty feet per minute, and the drawbridge may be opened just at the time the ship approaches, which will not require a minute ; the ship will pass in about a minute and a half, and it may be shut again in somewhat less than a minute ; in the whole, making about three minutes and a half. I have seen it done at Bristol, in three minutes, over the river Frome."

For further information, I refer you to plans Nos. 1, 2, 3, herewith transmitted.

JOHN WILSON.

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No. 2.

*Philadelphia, March 7th, 1831.*

DEAR SIR,—

In answer to your letter, requesting my "opinion, in writing, whether it be practicable to construct a canal around the western abutment of the Schuylkill Permanent Bridge, for the purpose of permitting sea vessels to pass to the river above the bridge without stopping the travel at any time on the highway over the canal, (leading to and from the city,) by means of two moveable bridges, at a distance from each other not exceeding 120 feet," I cheerfully submit the following opinion.

On the supposition that the canal is situated at the distance of about 300 feet from the face of the abutment, and that divergent rond-ways lead from the latter to the canal bridges, and unite again at about the same distance from the canal, (the bridges of course being of suitable construction, and the requisite attention being paid to their management,) I have no doubt of the practicability of the measure.

The great thoroughfares in various parts of the United States, cross the streams by means of bridges with single draws, which permit the passage of vessels with masts. The plan proposed, inasmuch as it embraces two bridges, will evidently obviate the delay which necessarily attends the use of such single draws.

I remain, dear sir, very respectfully,

Your most obedient servant,

S. H. LONG,

*B't. L't. Col. U. S. Engineers.*

G. W. SMITH, Esq.

No. 3.

*Philadelphia, March 1st, 1831.*

SIR,—

With respect to the practicability of making a passage around the western abutment of the Schuylkill Permanent Bridge for vessels, there cannot be a doubt, at the same time leaving the travel to the Schuylkill Permanent Bridge perfectly free and safe; the bridges as proposed, either the pivot, or those on the rail, will have the desired effect, if properly constructed. With respect to the latter, it is proposed to have them twenty-four feet wide each, so as to admit of passing and repassing at the same time, keeping the order as on the Schuylkill Permanent Bridge; (the distance between the proposed bridges permitting a vessel to lie between them while in the act of drawing off and on,) always having a free passage across the canal on one of them.

The bridges placed on iron rails, on which they will be moved by means of a wheel and pinions, the crank of which being turned twenty-four times per minute, will cause the pinion working the rack to revolve six times; it being six inches diameter, will move the bridge nine feet five inches; the canal being twenty-three feet wide, will make the time less than two and a half minutes drawing the bridge.

Allowing five minutes for the bridges, and three for the passage, will make the whole time of passing not to exceed eight to ten minutes; the bridges as per plan are so elevated, as to leave the hull of the vessel below the level of the road; that with guard walls on each side of the canal, will not permit any part of the vessel being seen, except part of the masts; it likewise places the bridges above the freshets in the river, which otherwise might destroy them. The construction of the bridges is such as to insure their being steady, and not liable to get out of order; there will be a gate or bar across each opening, when either of the bridges are drawn back, to prevent any accident taking place by persons not observing the bridge being removed. To prevent any accident, from horses taking fright while crossing the bridges, the sides are made high and close, and a roof may be put on them if thought necessary. The requisite repairs from decay, may be done without delay to the passage of the Permanent Bridge. There is no part of the bridges that is likely to break, except the pin through the wheels; and should that take place, there cannot be damage done to passengers on the bridge, as the distance between the rail and the bridge is but two inches, and by having extra pins on hand may be replaced in a few minutes.

I am, with great respect, yours, &c.,

F. ERDMANN.

No. 4.

*Philadelphia, March 6th, 1831.*

MICHAEL BAKER Esq.

*Member of the Councils of the City of Philadelphia.*

DEAR SIR,—

In compliance with your request, I beg leave to inform you, that in the year 1830 I examined the site through which it is proposed to cut a canal around the western termination of the abutment or wing walls of the Permanent Bridge at High street; and I also examined the plans for the canal, and the bridges connected therewith, drawn by Frederick Erdmann for the Bridge Company. My opinion on the subject is concluded, that the contemplated works could be effected without doing any injury, and that their construction would not cause delay, or endanger those crossing the Permanent Bridge.

The plans, Nos. 1, 2, and 3, designed by Major Wilson, (which I examined this day,) confirm my former opinion, and there is not a shadow of doubt in my mind but that the work can be accomplished in the most satisfactory manner.

Apart from the great advantages this improvement will have, of increasing the rents of the public landings, and enhancing the value of other property belonging to the city, as well as that belonging to individuals, I am of opinion that the avenue which will be opened by the construction of this canal, together with the opening of Beech street, fifty feet wide, through the eastern abutment of the bridge,\* (both operating as vents to the water in times of freshets,) will have a tendency to protect the Fair Mount water works from inundation.

It is well known, that the river between the Upper Ferry and the Permanent Bridge, is at present 1200 feet wide, which width affords space for ice and water to spread; but, it must be presumed, that the flats on the west side of the Schuylkill, within those limits, will be improved by wharves and stores, which will naturally contract the width of the river to 500 feet; and its depth cannot be increased by an increased velocity of the water, as the bottom is entirely composed of rock: it must therefore be concluded, that the ice and water must accumulate, and if proper provisions are not made to enlarge the passages to vent the water, in addition to those now existing between the abutments and piers of the Permanent Bridge, great destruction must take place to the property above it.

From the observations I have made in times of freshets, since the year 1812, at which period the Fair Mount water works

\* This has been authorized by the local authorities. G. W. S.



were commenced, I have no doubt, that when the 7000 feet of river front below the Permanent Bridge shall be wharfed out beyond low water mark by solid piers, in the manner they are now permitted to improve, (instead of with pile wharves, twenty feet inside of low water mark, so as to allow the water to pass under them,) that the abutments of the bridge must be opened to form land arches, for the vent of the water coming from above.

In order to give you the grounds for my prediction of what may happen, I beg leave to give you the measured heights of the ice and water at different places during the freshet of the year 1822, which are the best criterions from which to judge what may be the consequences hereafter, if the necessary precautions are not taken to prevent its recurrence.

The freshet of 1822 caused a rise of ice, (sixteen inches thick,) and water, at Flat Rock, twenty-five feet above common river height; at Peter Robinson's mills it rose twenty-one feet; at the Falls of Schuylkill it rose nineteen feet, *and carried away the bridge*; at Fair Mount it rose fifteen feet five inches above high tide, and eight feet eleven inches above the top of the dam; and at the Permanent Bridge, at High street, it rose ten feet. These facts are fresh in my mind, owing to the great danger the Fair Mount water works were in during the freshet; I think they are such conclusive evidences that great caution is necessary, that I do not deem any further remarks necessary to convince any reflecting man, that the canal in question, if accomplished, will ensure great benefits to a section of the city now cut off from its just rights, whilst the execution of the project under consideration cannot do harm.

Under these considerations, and with an anxious wish that every thing should be done for the protection of the Fair Mount water works,

I remain, your humble servant,  
FREDERICK GRAFF.

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No. 5.

*Philadelphia, March 4th, 1831.*

GENTLEMEN,—

In reply to yours of yesterday, I have to state, for the last two years past, I have, with the utmost difficulty, found a wharf on the Schuylkill, to put the iron ore upon which is brought down the canal from Montgomery county, for furnaces in New-Jersey; and as this wharf was also used by others, for other purposes, vessels taking my ore have frequently been detained, to get to the wharf, *two and three days* at a time. My vessels coming with back cargoes, of rails, lumber, or wood, have also frequently

been detained three and four days, to get a wharf to discharge their cargoes. This evil, for want of wharf room on the Schuylkill, is increasing very fast, but which would be greatly relieved by the proposed canal round the bridge, so as to bring the Schuylkill, above the bridge, into use.

Very respectfully,  
Your obedient servant,  
MARK RICHARDS.

Messrs. Henry Nixon }  
and H. J. Williams. }

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No. 6.

*Philadelphia, March 5th, 1831.*

Messrs. H. NIXON, & H. J. WILLIAMS,—

In answer to yours of the 4th instant, we beg leave to observe, that at our location, (Callowhill street wharf, Schuylkill) we have a front on the river of about 300 feet, and an extent of dock of 700 feet more, for which we pay a rent of 600 dollars. We are also the tenants of the wharf on the western side of the Schuylkill, belonging to the Permanent Bridge Company, which has a front on the river of 90 feet, together with a dock of 200 feet more, at a rent of 325 dollars.

We have no hesitation in saying, that if a canal, as contemplated, was constructed, it would be a saving of much expense, by enabling us to concentrate our business at one place, and firmly believe the time is not far distant, when the wharves below the Permanent Bridge will not be sufficient to accommodate the shipping alone of that river.

Yours, very respectfully,  
J. R. & J. M. BOLTON.

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No. 7.

*Philadelphia, March 5th, 1831.*

H. NIXON, Esq.

DEAR SIR,—

I have the honour to acknowledge the receipt of your note of yesterday, and should have replied on the receipt thereof, had I not been much engaged in superintending the repairs of my boats, preparatory to the recommencement of the canal trade.

At the present time I have only five Union Canal boats. The difficulties and detention to my boats have been great, in conse-

quence of being compelled to send them below the bridge for the purpose of taking in their lading of plaster, &c., which, in consequence of masted vessels not being able to get above the bridge with their cargoes, have of course been necessitated to land below; and, consequently, an increase of rent, as the expense of hauling would add too much to the cost; so much so that we could not compete with others engaged in the same business south of it. In cases of high winds and freshets, which often occur in the Schuylkill, we have often to wait a considerable time, and always attended with additional expense: as I observed, I am engaged in the Union Canal trade exclusively, consequently cannot state the great inconvenience and *loss* those engaged in the coal business have to encounter in getting their coal on board of sea vessels, but feel assured, from my observations, it must be great, and gives to others, below the bridge, advantages, which, I should conceive, unquestionably ought to be granted to those above it. I beg leave to state, I am totally disinterested in regard to owning or having any interest in property located on either side the bridge, but give you my humble statement, frankly and sincerely.

With sentiments of high respect, I subscribe myself,

Your obedient servant,

JOSEPH S. SNOWDEN.

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No. 8.

*March 7th, 1831.*

DEAR SIR,—

In reply to your inquiries, we may observe, that upwards of three hundred names of boatmen, engaged in the Schuylkill trade, have been signed to the petitions in favour of the canal round the Permanent Bridge. We understand there are other boatmen, who have signed similar petitions, which we have not seen.

A certificate of a similar nature, which we will show you tomorrow, states, that the boats are sometimes blown ashore, on their passage down, between the bridges, a circumstance of not unfrequent occurrence.

Yours, respectfully,

J. R. & J. M. BOLTON.

G. W. SMITH Esq.

## No. 9.

*Certificate of the owners of forty-five canal boats.*

The subscribers, owners of boats on the Schuylkill and Union canals, hereby certify, that, on the arrival of their boats at the outlet of the Fair Mount locks, the captains find the river so rough, in many instances, in consequence of high winds, as to compel them to haul along side of the nearest wharves for safety; the construction of the boats being such as to render it exceedingly dangerous for them to proceed lower down, during the prevalence of the stormy weather.

J. R. & J. M. BOLTON,  
W. S. PECK,  
MAHLON ORTLIP,  
JACOB ASHBURNER,  
JOSEPH S. SNOWDEN,  
JAMES WILSON,  
JOHN CURRY,  
BURTON W. WAPLES,  
JOHN CORYELL,  
CHARLES BIRD,  
JAMES C. KEEN.

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 No. 10.

Cadwalader Evans Esq., has politely given the following information to me, in answer to my inquiries:—"The *City* front, on the river Schuylkill, above the Permanent Bridge, extends 2150 feet; of which about 1435 feet continue to be held by the parties or their heirs who possessed the same *prior* to the erection of that bridge; viz.—the city lots, from High to Filbert street, about 250 feet; the street fronts, 256 feet; C. Evans and A. Cuthbert, 632 feet; George Bickham's heirs, 150 feet; A. Cuthbert, 153 feet."

The high rent of the wharves *below* the bridge, (which, of course, is tax on trade,) may be understood from the following memorandum, by another person; of its accuracy I know nothing myself. The North American Coal Company pay for their wharf 1800 dollars per annum; S. P. Wetherill pays for his 1000 dollars per annum; Mr. Van Armridge 1000 dollars; two others rent for 1800 dollars per annum.

G. W. SMITH.